

**REMARKS**

The applicants note with appreciation the acknowledgement of the claim for priority under section 119 and the notice that all of the certified copies of the priority documents have been received.

Claims 1-11 are pending. The applicants respectfully request reconsideration and allowance of this application in view of the above amendments and the following remarks.

**Section 112 rejections**

Claim 3 was rejected under 35 USC 112, second paragraph, as being indefinite. The office action asserts that there is insufficient antecedent basis for the phrase "the defects in the ceramic crystal lattice." Claim 3 has been amended to remove the definite article from this phrase. Claim 3 is now considered to be fully definite, and the applicants respectfully request withdrawal of this rejection.

In addition, for clarity, claim 3 has been amended to include two commas. No new matter has been added.

**Section 102 rejections**

Claims 1-11 are rejected under 35 USC 102(b) as being anticipated by the patent to Beauseigneur *et al.* (Beauseigneur). The patent to Beauseigneur discloses a porous catalyst support for use in a catalytic converter for treating exhaust gas. The patent to Beauseigneur discloses colloidal particles, which are to be applied to a ceramic substrate. The colloidal particles are bonded to a metal catalyst. However, the Beauseigneur patent does not disclose a

substrate ceramic and a multitude of pores or elements capable of supporting a catalyst component directly on the surface of the substrate ceramic, as claimed in claim 1. The colloidal particles of the Beauseigneur patent are part of a washcoat layer for increasing the surface area of the support. See claim 1 of Beauseigneur, which recites "walls containing washcoat particles bonded to the walls." Therefore, the catalyst is not loaded "directly" onto a base ceramic surface, as claimed in claim 1. Claims 2-11 depend on claim 1 and are believed to be patentably distinguished from the patent to Beauseigneur for the same reasons given with respect to claim 1. Therefore, the applicants respectfully request that this rejection be withdrawn.

#### Section 103 rejections

Claims 1-11 were rejected under 35 USC 103(a) as being unpatentable over the patent to Beauseigneur in view of the patent to Strehlau *et al.* (Strehlau) and Uchikawa *et al.* (Uchikawa). However, none of these patents discloses a substrate ceramic and a multitude of pores or elements capable of supporting a catalyst component directly on the surface of the substrate ceramic, as claimed in claim 1.

As mentioned above, the patent to Beauseigneur fails to disclose a substrate ceramic and a multitude of pores or elements capable of supporting a catalyst component directly on the surface of the substrate ceramic.

The Strehlau patent discloses a catalytic structure having a coating layer on a base ceramic surface in which a catalyst component is loaded on the coating layer, as described in column 8, line 40. The patent to Strehlau fails to disclose a substrate ceramic and a multitude of pores or elements capable of supporting a catalyst component directly on the surface of the substrate ceramic.

The patent to Uchikawa *et al.* relates to a gas sensor and belongs to a different technical field from catalyst bodies. The patent to Uchikawa also fails to disclose or suggest a substrate ceramic and a multitude of pores or elements capable of supporting a catalyst component directly on the surface of the substrate ceramic.

Since none of the individual references of the combination disclose or suggest a substrate ceramic and a multitude of pores or elements capable of supporting a catalyst component directly on the surface of the substrate ceramic, then the combination cannot include this feature. Claims 2-11 depend on claim 1 and are believed to be patentably distinguished from the prior art combination for the same reasons given with respect to claim 1. Therefore, the applicants respectfully request that the section 103 rejections be withdrawn.

Obviousness-type double patenting rejections

MPEP §804 sets forth the factual inquiries according to *Graham v. John Deere Co.* for determining whether an obviousness type double patenting rejection is proper:

- (A) Determine the scope and content of a patent claim and the prior art relative to a claim in the application at issue;
- (B) Determine the differences between the scope and content of the patent claim and the prior art as determined in (A) and the claim in the application at issue;
- (C) Determine the level of ordinary skill in the pertinent art; and
- (D) Evaluate any objective indicia of nonobviousness.

If a double patenting rejection is determined to be proper in view of the above factual inquiries, an obviousness type double patenting rejection should make clear:

(A) The difference between the inventions defined by the conflicting claims – a claim in the patent compared to a claim in the application; and

(B) The reasons why a person of ordinary skill in the art would conclude that the invention defined in the claim in issue is an obvious variation of the invention defined in a claim in the patent.

None of the numerous double patenting rejections set forth in the office action of May 21 2003 comply with the requirements of MPEP §804. The scant reasoning given to support these rejections is deficient in view of the requirements set forth by MPEP §804.

Claims 1-11 were provisionally rejected under the doctrine of obviousness-type double patenting as being unpatentable over claims 1-14 of co-pending application 10/202,826 to Tanaka *et al.* However, the claims of the present application are patentably distinct from those of application 10/202,826. The claims of application 10/202,826 require that the catalyst be made of a compound containing no chlorine. The claims of the present application include no similar limitations. The claims of the present application call for a substrate ceramic and a multitude of pores or elements capable of supporting a catalyst component directly on the surface of the substrate ceramic, which contains metal elements having NO<sub>x</sub> absorbent capacity. No metal elements having NO<sub>x</sub> absorbent capacity are recited in the claims of application 10/202,826. The office action fails to set forth why the claims of the present application are obvious variations of those in application 10/202,826. The claims of the present application are not obvious variations of those in application 10/202,826, and the double patenting rejection should be withdrawn.

Claims 1-11 were provisionally rejected under the doctrine of obviousness-type double patenting as being unpatentable over claims 1-18 of co-pending application 09/960,361 to

Tanaka *et al.* The claims of application 09/960,361 are directed to a ceramic catalyst body wherein catalyst components of a particular size are loaded onto a ceramic support having a large number of pores enabling the catalyst components to be loaded directly onto a base ceramic surface (e.g. claim 1) or wherein the base ceramic has cordierite for its main component and/or a metal element substituted for constituent elements of the base ceramic (e.g., claims 8, 16, 17).

The claims of the present application contain no similar limitations, but are directed to a substrate that contains metal elements having NO<sub>x</sub> absorbing capacity (e.g., claim 1). No such limitation appears in the claims of application 09/960,361. Further, the Office Action fails to set forth why the claims of the present application are an obvious variation of the claims in application 09/960,361.

Claims 1-11 were provisionally rejected under the doctrine of obviousness-type double patenting as being unpatentable over claims 1-41 of co-pending application 09/960,498 to Tanaka *et al.* However, at least claims 1 and 17 of application 09/960,498 require an anti-evaporation metal layer on the catalyst particles. Other independent claims of application 09/960,498 require a trap layer upstream of the gas to be purified. No such metal layer or trap layer is described or suggested in the claims of the present application. The claims of the present application call for, among other things, a substrate that contains metal elements having NO<sub>x</sub> absorbing capacity; there are no similar claims in application 09/960,498. The office action fails to state why the claims of this application are an obvious variation of the claims in application 09/960,498. The claims of this application are not an obvious variation of the claims in application 09/960,498 and are patentably distinct from those claims, and the double patenting rejection should be withdrawn.

Claims 1-11 were provisionally rejected under the doctrine of obviousness-type double patenting as being unpatentable over claims 1-41 of co-pending application 10/103,568 to Tanaka *et al.* However, the claims of the present application are patentably distinct from those of application 10/103,568. The claims of the present application call for a substrate that contains metal elements having NO<sub>x</sub> absorbing capacity, and there is no similar limitation in the claims of application 10/103,568. The office action fails to set forth why the claims of the present application are obvious variations of those in application 10/103,568. The claims of the present application are not obvious variations of those in application 10/103,568, and the double patenting rejection should be withdrawn.

Claims 1-11 were provisionally rejected under the doctrine of obviousness-type double patenting as being unpatentable over claims 1-21 of co-pending application 09/961,151 to Kondo *et al.* However, all the claims of application 09/961,151 contain limitations that differ significantly from those of the present application. For example, claim 1 of application 09/961,151 requires a different quantity of catalyst at a middle portion of its carrier than at a peripheral portion. Claim 2 of application 09/961,151 requires a different surface area at a middle portion of the carrier. The claims of the present application have no similar limitations. Further, the claims of application 09/961,151 do not require a substrate that contains metal elements having NO<sub>x</sub> absorbing capacity. Therefore, the claims of the present application are not obvious variations of the claims of application 09/961,151, as required for an obviousness type double patenting rejection, and are patentably distinct from those claims. Furthermore, the office action fails to indicate why the claims of the present application are an obvious variation of the claims in application 09/961,151. Therefore, the double patenting rejection based on application 09/961,151 should be withdrawn.

Claims 1-11 were provisionally rejected under the doctrine of obviousness-type double patenting as being unpatentable over claims 1-41 of co-pending application 09/966,723 to Koiki *et al.* However, the claims of application 09/966,723 require a multitude of cells, which are substantially parallel to each other, with the inside thereof serving as a gas flow passage. The claims of the present application contain no similar limitation. The claims of the present application call for, among other things, a substrate that contains metal elements having NO<sub>x</sub> absorbing capacity; there is no similar limitation in the claims of application 09/966,723. The office action fails to set forth why the claims of the present application are an obvious variation of those in application 09/966,723. The claims of the present application are not obvious variations of and are patentably distinct from those in application 09/966,723, and the double patenting rejection should be withdrawn.


Claims 1-11 were provisionally rejected under the doctrine of obviousness-type double patenting as being unpatentable over claims 1-29 of co-pending application 10/180,033 to Tanaka *et al.* However, the claims of the present application are patentably distinct from those of application 10/180,033. Among other things, the claims of application 10/180,033 require a honeycomb structure and a staggered arrangement. The claims of the present application include no similar limitations. The claims of the present application call for a substrate that contains metal elements having NO<sub>x</sub> absorbing capacity, and there is no similar limitation in the claims of application 10/180,033. The office action fails to set forth why the claims of the present application are obvious variations of those in application 10/180,033. The claims of the present application are not obvious variations of those in application 10/180,033, and the double patenting rejection should be withdrawn.

Serial No. 09/961,203

In view of the forgoing, the applicants respectfully submit that this application is in condition for allowance. A timely notice to that effect is respectfully requested. If questions relating to patentability remain, the examiner is invited to contact the undersigned by telephone.

Please charge any unforeseen fees that may be due to Deposit Account No. 50-1147.

Respectfully submitted,

  
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